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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,123	08/01/2003	Victor L. Gonzalez	10017098-3	3658
7590	03/29/2004		EXAMINER	
HEWLETT-PACKARD COMPANY Intellectual Property Administration P.O. Box 272400 Fort Collins, CO 80527-2400				STEPHENS, JUANITA DIONNE
		ART UNIT		PAPER NUMBER
		2853		

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/633,123	GONZALEZ, VICTOR L.
	Examiner	Art Unit
	Juanita D. Stephens	2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 36-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 49 is/are allowed.
- 6) Claim(s) 36-39, 42, 43, 46, 50, 51, 53 and 55 is/are rejected.
- 7) Claim(s) 40, 41, 44, 45, 47, 48, 52 and 54 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 01 August 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

## DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 36-39, 42-43, 46, 50-51, 53, and 55 are rejected under 35 U.S.C. 102(b) as being anticipated by Tachihara (US 5,481,287).

Tachihara discloses a method of ejecting fluid from a firing chamber, a fluid ejection device, and a resistor arrangement (Fig. 4A) for an inkjet printhead, the resistor arrangement comprising: 1) at least one inner resistor/driver/means (heating element 402) adapted to create a first drive bubble for ejecting a first drop of ink from the inkjet printhead (col 4, ln 52-col 5, ln 3), 2) at least one outer resistor/driver/means (heating elements 401 and 403) surrounding the inner resistor, the inner resistor and the outer resistor together being adapted to create a second drive bubble for ejecting a second drop of ink from the inkjet printhead, the inner resistor being adapted to create the first drive bubble independently of the outer resistor, the second drop on ink being larger than the first drop of ink (col 4, ln 52-col 5, ln3), wherein the inner resistor/driver and the outer resistor are electrically connected, 3) wherein the inner driver comprises an inner resistor (heating element 402) and the outer driver comprises an outer driver (heating elements 401 and 403), and 4) wherein the inner resistor and the outer resistor are electrically connected in parallel (col 5, Ins 4-9). The method of claims 50, 51 and 55 are disclosed in Tachihara. Tachihara inherently teaches wherein the inner resistor and

the outer resistor are arranged such that the second drive bubble is generally centered over the inner resistor.

***Allowable Subject Matter***

3. Claims 40, 44, 47, 52 and 54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 41 will be allowed when claim 40 is rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 45 will be allowed when claim 44 is rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 48 will be allowed when claim 47 is rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter:

The limitation of wherein the outer driver is operably coupled with a barrier, further wherein the barrier covers the outer driver during creating of the first drive bubble. This invention solves the problem of providing better drop-volume control because the size of the chamber is adjusted to better fit the drop. It is this limitation, which is not taught or suggested in the prior art, which makes the claims allowable over the prior art.

The limitation of first and second switching devices, operably coupled with the inner and outer resistors for selecting the inner and outer resistors.

The limitation of changing the size of the firing chamber depending on whether the first drive bubble or the second drive bubble is created. This invention solves the problem of providing better drop-volume control because the size of the chamber is adjusted to better fit the drop. It is this limitation, which is not taught or suggested in the prior art, which makes the claims allowable over the prior art.

The limitation of means for changing the size of a fluid ejection barrier depending on whether the first drive bubble or the second drive bubble is created. This invention solves the problem of providing better drop-volume control because the size of the chamber is adjusted to better fit the drop. It is this limitation, which is not taught or suggested in the prior art, which makes the claims allowable over the prior art.

5. Claim 49 is allowed.
6. The following is a statement of reasons for the indication of allowable subject matter:

The limitation of wherein at least one of the inner resistor and the outer resistor is electrically connected with a barrier formed of a shape change material. This invention solves the problem of providing better drop-volume control because the size of the chamber is adjusted to better fit the drop. It is this limitation, which is not taught or suggested in the prior art, which makes the claims allowable over the prior art.

#### **Contact Information**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juanita D. Stephens whose telephone number is (571) 272-2153. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Juanita Stephens  
Primary Examiner  
March 19, 2004  
2853